

REMARKS

Claims 1-20 remain pending. No new matter has been added.

Applicants understand the previous rejection under 35 U.S.C 102(e) has been overcome.

35 U.S.C. Section 102(e) Rejections

Paragraph 3 of the above referenced Office Action rejects independent Claims 1, 9, and 18 as being anticipated by Willke (US 6,625,696). As such, Applicants respectfully traverse and assert that the independent Claims 1, 9, and 18 are not anticipated or rendered obvious by Willke.

Applicants direct the Examiner to independent Claim 1 which recites in part (emphasis added):

a tracker within the prefetcher and configured to recognize accesses to a plurality of cache lines, wherein the accesses form a stream type sequential access pattern, and use a bit vector to predictively load a target cache line indicated by the stream-type sequential access pattern from the high latency memory into a low latency memory for the processor.

Independent Claim 9 and 18 recite distinguishing limitations similar to those recited in Claim 1.

Applicants respectfully assert that Willke does not teach or suggest embodiments of the present invention as recited in Claim 1. To the extent

that Willke may mention the quantities of data requested by requesting device in the last few requests for data are retained by control logic and used together as a pattern to make predictions of how much data will be requested in the next request for data that will be made by requesting device 100 (Col. 2, lines 49 – 54), Applicants respectfully assert that Willke does not teach or suggest the features of a bit vector to predictively load a target cache line, as claimed (emphasis added). That is, Applicants respectfully assert that predicting the quantity of data of for a future request is substantially different from using a bit vector to predictively load a cache line, as claimed. Further, to the extent that Willke may mention that in determining the accuracy of the prediction, a count will be made of the number of cache lines associated with a given prediction that are subsequently accessed in supplying data in answer to a future request for data (Col. 7, lines 29-32), Applicants respectfully assert that the quantities of Willke are larger than a cache line and therefore Willke does not teach or suggest the feature of using a bit vector to predictively load a target cache line, as claimed. That is, Applicants understand Willke to load quantities of data of which portions may not be used (Col. 7, lines 29-32). Accordingly, Applicants respectfully assert that Willke does not anticipate Claim 1 within the meaning of 35 U.S.C. §102(e) nor does Willke render Claim 1 obvious within the meaning of 35 U.S.C. §103(a).

Independent Claims 9 and 18 are patentable for similar reasons.
Dependent claims are patentable by virtue of their dependency.

35 U.S.C. Section 103 Rejections

Paragraph 5 of the above referenced Office Action rejects dependent Claims 6, 13, and 15 under 35 U.S.C. 103(a) as being unpatentable over Willke. For the reasons stated above, Applicants respectfully assert that independents Claim 1, 9, and 18 are allowable over Willke. As such, Applicants respectfully assert that Claims 6, 13, and 15 are not rendered obvious by Willke by virtue of their dependency. Therefore, Applicants respectfully assert that embodiments as recited by Claims 6, 13, and 15 are not rendered obvious by Willke.

Concerning Claim 17, the above referenced Office Action rejects Claim under 35 U.S.C. 103(a) as being unpatentable over Willke further in view of Microsoft Computer Dictionary (hereinafter "Microsoft"). Applicants respectfully disagree. For the reasons stated above, Applicants respectfully submit that independent Claim 9, from which Claim 17 depends is allowable over Willke. In addition, Applicants respectfully submit that Microsoft does not remedy the shortcomings of Willke. More specifically, Applicants respectfully assert that Microsoft does not teach or suggest using a bit vector to predictively load a target cache line based on stream type sequential

access, as claimed. Therefore, Applicants respectfully assert that the embodiments of the present invention as recited in Claim 17 are not rendered obvious by the combination of Willke and Microsoft within the meaning of 35 U.S.C. 103(a).

Concerning Claims 19 and 20, the above referenced Office Action rejects Claim under 35 U.S.C. 103(a) as being unpatentable over Willke further in view of Brooks (US 6,081,868). Applicants respectfully disagree. For the reasons stated above, Applicant respectfully submits that independent Claim 18, from which Claims 19 and 20 depend are allowable over Willke. In addition, Applicants respectfully submit that Brooks does not remedy the shortcomings of Willke. More specifically, Applicants respectfully assert that Brooks does not teach or suggest using a bit vector to predictively loading target cache lines based on stream type sequential access, as claimed. Therefore, Applicants respectfully assert that the embodiments of the present invention as recited in Claim 19 and 20 are not rendered obvious by the combination of Willke and Brooks within the meaning of 35 U.S.C. 103(a).

CONCLUSION

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application. Please charge any additional fees or apply any credits to our PTO deposit account number: 50-4160.

Respectfully submitted,
MURABITO, HAO & BARNES

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